Indiana Epidemiology Newsletter

Indiana State Department of Health

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Mumps Outbreak – Indiana Information

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Vaccine-Reportable Disease Epidemiologist

Background

The largest mumps outbreak since the late 1980s is now occurring in the United States. The outbreak, which began in December 2005, involves several Midwestern states, with the majority of the cases being reported in Iowa. **As of April 19, 2006, no cases of mumps that are linked to the Iowa outbreak have been reported in Indiana residents.** Indiana has confirmed one case of mumps in 2006. This case is unrelated to the Iowa outbreak. Given the size of this outbreak and its spread to other states, it is likely that there will be an increase in the number of reported cases of mumps in Indiana. The purpose of this alert is to provide general guidance on mumps case reporting, laboratory specimen collection, and health care worker immunity.

The best way to prevent and control mumps disease is through immunization with MMR vaccine (measles/mumps/rubella). **Health care facilities and providers should give priority to ensuring that all employees are immune to mumps (please refer to the guidance below).**

Reporting Criteria

Indiana Administrative Code 410 IAC 1-2.3 stipulates that physicians and hospital administrators shall report cases and suspect cases of mumps (Sec. 47) to the local health officer in whose jurisdiction the patient was examined at the time the diagnosis was made or suspected. Laboratories are also required to report laboratory findings demonstrating evidence of mumps infection (Sec. 48) to the Indiana State Department of Health (ISDH). Local health department staff and ISDH Immunization Program field investigators will follow up on all mumps cases reported by physicians, hospitals, and laboratories.

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What to Report:

- A suspect case meeting the clinical case definition for mumps (see Clinical Case Definition below).
- A confirmed case with laboratory evidence of mumps infection (see Laboratory Criteria for Diagnosis below) or that meets the clinical case definition and is epidemiologically linked to a confirmed or suspect case. A laboratory-confirmed case does not need to meet the clinical case definition.

  Clinical Case Definition: An illness with acute onset of unilateral or bilateral tender, self-limiting swelling of the parotid or other salivary gland lasting >2 days and without other apparent cause.

Laboratory Testing Services

Laboratory Criteria for Diagnosis:

- Positive serological test for mumps immunoglobulin M (IgM) antibody*, **or**
- Significant rise between acute and convalescent phase titers in serum immunoglobulin G (IgG) antibody level by any standard serologic assay, **or**
- Isolation of mumps virus from clinical specimens, **or**
- Detection of mumps virus by reverse transcription polymerase chain reaction (RT-PCR).
    - *Comment: False-positive IgM results by immunofluorescent antibody assays have been reported.

Currently, the ISDH is requesting that serological and clinical specimens be submitted on each suspected case of mumps.

Serological Specimens

Serum should be collected as soon as possible after onset of symptoms for IgM antibody testing. An additional serum specimen should be obtained 2-4 weeks after onset to assess rise in IgG antibody titer.

Submit at least 3 ml of serum in the plastic screw-capped vial provided in the mailing container (ISDH type 9A). Store and ship specimens cold (using ice packs). Serum specimens may be shipped without refrigeration in suitable mailing container (e.g., ISDH type 9A). Serum is the preferred specimen, but 5-10 ml of whole blood is acceptable.

If specimens will be delivered via U.S. Postal Service, route to:
Indiana State Department of Health
Virology/Immunology
P.O. Box 7203
Indianapolis, Indiana 46207-7203

If specimens will be delivered via courier/drop off, route to:
Indiana State Department of Health
Virology/Immunology
635 North Barnhill Drive, Room MS2023
Indianapolis, Indiana 46202

The Virology/Immunology Request Form, State Form 35212 (R3/5-03), http://www.IN.gov/isdh/healthinfo/westnile/35212.pdf, should be completed and sent along with

serological specimens. ISDH type 9A mailing containers and Virology/Immunology Request Forms can be obtained from the ISDH Laboratories by telephone at 317.233.8105 or by e-mail at Containers@isdh.IN.gov.

Clinical Specimens

Clinical specimens (buccal swab, throat swab, or urine) should be obtained for virus detection by isolation in cell culture within 1-4 days of symptoms onset if possible; however, specimens collected up to 9 days post-onset may be acceptable. Keep the samples cold (4C) or frozen (-70C). Avoid freeze-thaw cycles.

Parotid gland/buccal swabs of oral secretions may provide the best viral samples.
Use a plastic shaft/Dacron tip swab for collecting swab samples. Massage the parotid gland area (the space between the cheek and teeth just below the ear) for about 30 seconds prior to collection of the buccal secretions. The parotid duct (Stensen's duct) drains in this space near the upper rear molars. A throat swab (oropharyngeal or nasopharyngeal swab (wire shaft/Dacron tip) can also be collected and added with the buccal swab. Place swab(s) in a tube containing 2-3 mls of viral transport media (VTM) or other sterile isotonic solution (phosphate buffered saline or cell culture medium). Swabs can be frozen at -70C or held at 4C until shipment.

Urine: Collect 5-10 ml of clean-catch urine and store in a screw-top sterile container, preferably a 15- or 25-ml centrifuge tube. Bulk urine should be kept cold (4C). Upon receipt at a facility equipped to centrifuge the sample, the urine is centrifuged at 4C for 10 minutes at 400 x g, recovering the sediment in 2-3 ml of sterile cell culture fluid or VTM. The urine sediment can be frozen at -70C or held at 4C until shipment.

The Virology/Immunology Request Form, State Form 35212 (R3/5-03), http://www.IN.gov/isdh/healthinfo/westnile/35212.pdf, should be completed and sent with the specimens. *Please complete a separate form for each specimen*. Ship in an insulated container using ice packs or dry ice.

If clinical specimens for virus isolation will be delivered via courier, pack specimens according to the shipping requirements for Category B Infectious Substances and route to:
Indiana State Department of Health Laboratories
Attn: Virology Lab
7230 Western Select Drive
Indianapolis, Indiana 46219

If specimens will be delivered via U.S. Postal Service, pack specimens according to U.S. Postal Service shipping requirements for diagnostic/clinical specimens and route to:
Indiana State Department of Health Laboratories
Attn: Virology Lab
P.O. Box 7203
Indianapolis, Indiana 46207-7203

Mumps Prevention through Immunization

The principal strategy to prevent mumps is to achieve and maintain high immunization levels. The Advisory Committee on Immunization Practices (ACIP) recommends that all preschool-aged children 12 months of age and older receive one dose of MMR, all school-aged children receive two doses of MMR, and all adults have evidence of immunity against mumps. Two doses of MMR vaccine are more effective than a single dose. Consequently, during outbreaks and for at-

risk populations, ensuring high vaccination coverage with two doses is encouraged. Hospital and other health care workers (HCW) are considered to be at significant risk for acquiring or transmitting mumps disease, and, therefore, documentation of immunity should be available for all HCWs at their place of employment. HCWs can be considered immune to mumps if a person:

- Has documentation of adequate immunization (two doses preferred for health care workers), or
- Was born before 1957*, or
- Has serologic evidence of mumps immunity

All HCWs (i.e., medical or nonmedical, paid or volunteer, full- or part-time, student or non-student, with or without patient care responsibilities) should be immune to mumps. All new staff should be assessed for mumps immunity.

*Birth in the U.S. before 1957 does not necessarily guarantee mumps immunity. Therefore, it is recommended that HCWs have documentation of at least one dose, and preferably two doses, of MMR vaccine on or after the first birthday or serologic proof of immunity. An effective, routine MMR vaccination program for HCWs (in addition to standard precautions) is the best approach to prevent nosocomial transmission.

Control of Cases and Contacts

- Cases: Persons infected with mumps should be excluded from school, daycare centers, public gatherings (including workplaces) and contact with susceptible persons outside the household for nine days* after the onset of swelling. The infected person may return to normal activities on the tenth day following the onset of swelling.
- Contacts: All contacts should be evaluated for immune or vaccination status. If a person is not known to be immune to mumps, refer for vaccination. If a person has a contraindication or refuses vaccination, educate on personal protective measures and symptoms of mumps. Note: Mumps vaccination will not prevent infection in a person who has been recently exposed, but vaccinating may prevent future cases and outbreaks.

*****The state of Iowa is currently using a five-day period following symptoms onset for the contagious period. The rationale is based on other expert body recommendations. Indiana will follow the current Centers for Disease Control and Prevention (CDC) recommendations, which uses nine days following onset of symptoms as the contagious period, until further notice.

Please refer to the ISDH Web site at www.IN.gov/isdh for further information on managing mumps cases in health care settings.

Universal Precautions Rule Change

Jean Svendsen, R.N.
Chief Nurse Consultant

The Universal Precautions Rule amendments, LSA Document #05-259, become effective April 28, 2006. These amendments provide clarification to the existing requirements as well as update requirements based on best practices. Less stringent requirements would increase the

likelihood that an individual exposed to blood or body fluids would acquire a dangerous communicable disease. The amendments are as follows:
410 IAC 1-4-1.1 amends the definition of bloodborne pathogens.
410 IAC 1-4-4.3 adds a definition of HCV.
410 IAC 1-4-8 updates the sterilization requirements for equipment and environmental surfaces.
Prior to April 28, you may view the complete rule changes on the Web at LSA Document #05-259, http://www.in.gov/legislative/register/Vol29/05Feb/08P410050259.PDF.

May Is National Hepatitis Awareness Month

Cheryl Pearcy
Hepatitis C Coordinator

On March 3, 2006, the Indiana State Department of Health (ISDH) sponsored a teleconference for the purpose of brainstorming on activities that could be held during May, which has been designated National Hepatitis Awareness Month. Plans are currently under way for HEPFEST, a festival designed to promote public awareness regarding hepatitis. HEPFEST will be on Saturday, May 6, on the grounds of Auburn, Indiana's WWII museum in Dekalb County and will feature music from Synergy. Food will be provided along with games for the kids. Hepatitis A and B vaccine will be given to the first two adults requesting it. Free testing for hepatitis C and HIV will also be conducted. Political candidates will also be invited. For more information, contact Cindy Clark at cclark@isdh.IN.gov for details.

For groups wishing to participate on a local level, suggestions from the teleconference included fliers, posters, public service announcements, health fairs, and articles in publications geared toward target populations (e.g., Hispanic and Gay/Lesbian/Transgender newsletters). Implementing vaccine awareness promotions in local high schools by partnering with the "Vaccinate Before You Graduate" program was also mentioned. A similar idea suggested that colleges and universities partner with local HIV services to educate and test for hepatitis. Additional suggestions included mass hepatitis testing in county jail facilities with a primary emphasis on prevention and education and having booths at area motorcycle festivals/bike rallies – again, emphasizing awareness and prevention.

Hepatitis materials, posters, and brochures will be available by contacting Beth Easters at beth.easters@roche.com and Misha Honaker at Misha.J.Honaker@gsk.com. Please contact Beth Easters for more information.

Lack of funding and the inability to travel are often cited as reasons not to participate. With a topic as timely and vital as Hepatitis Awareness, the importance is not so much on WHAT the activity is as that there IS an activity, particularly this May.

For more information, please contact Cheryl Pearcy at cpearcy@isdh.IN.gov.

Helping Indiana Get INShape

Michael Wade, MPH
Syndromic Surveillance Epidemiologist

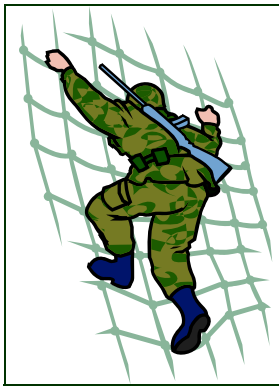
Linda Stemnock, BSPH
Biostatistician

In keeping with its long history of providing health information and statistics, the *Indiana Epidemiology Newsletter* is joining the INShape Indiana effort! INShape Indiana is an initiative to help Hoosiers improve their health by promoting increased physical activity, smoking cessation, and improved nutrition.

It is well documented that physical inactivity, cigarette smoking, and poor nutrition can negatively affect a person's health. INShape Indiana provides the citizens of Indiana with the opportunity to significantly improve their lives by making better choices in these areas. According to 2005 survey data*, although 73 percent of Hoosier adults claim to have performed leisure time physical activity in the last 30 days, only 15 percent met the recommendations for both moderate and vigorous physical activity. In regards to body mass index (BMI), 35 percent of adults surveyed are considered overweight and 27 percent are considered obese. Most adults (78%) do not eat the recommended five or more servings of fruits and vegetables daily. While 50 percent of Indiana adults do not smoke and 23 percent have stopped smoking, 27 percent are still current tobacco smokers. The short- and long-term impact of these relatively poor health-related statistics is far reaching, as they are closely linked to many diseases that lead to a reduced quality of life, chronic illness, and premature death. On the brighter side, there is ample opportunity for improvement.

Future issues of the *Indiana Epidemiology Newsletter* will feature articles focusing on the epidemiology of physical activity, smoking, and nutrition. When possible, these installments will be tailored specifically to Indiana in an effort to make the message more meaningful—to help all Hoosiers get INShape.

*Behavioral Risk Factor Surveillance System, Indiana Statewide Survey Data, 2005.



Training Room

Public Health Nurse Training Conference

The ISDH Epidemiology Resource Center (ERC) is sponsoring a public health nurse training conference on Thursday, May 25, 2006, from 9:00 a.m.-4:00 p.m., E.D.T., in Conference Room B of the Indiana Government Center South (IGCS). The IGCS is located at 402 West Washington Street, Indianapolis, in the block between Senate Avenue and West Street.

This training, targeted to public health nurses, includes the latest information on several disease topics, including:

- Hepatitis B
- Hepatitis C
- Tuberculosis
- Avian Influenza
- West Nile Virus
- Vaccine-Preventable Diseases
- Interviewing Methods
- Laboratory Specimen Collection
- Field Epidemiology
- Minority Health
- Syndromic Surveillance

This session will provide a great opportunity to meet new ISDH staff members. Classroom-style seating will be available for 125 participants. There is no registration fee, and all training materials will be provided. Participants will have one hour for lunch on their own and access to shopping in downtown Indianapolis.

Free parking will be available in the IGC parking garage located at Maryland and West Streets. From West Street, turn east onto Maryland Street (one-way east) and turn left onto Missouri Street (first stoplight). Enter the garage at entrance #1 and present the parking pass below to the attendant.

To register, please contact Trish Manual at 317.234.2809 or tmanuel@isdh.IN.gov **no later** than May 22, 2006.

Please allow this person to park in the Indiana Government Center parking garage at no charge in order to attend the Public Health Nurse Training Conference in Conference Room B of the Indiana Government Center South today, May 25, 2006, from 9:00 a.m.-4:30 p.m. This event is sponsored by the Indiana State Department of Health, Epidemiology Resource Center.

INDIANA STATE DEPARTMENT OF HEALTH IMMUNIZATION PROGRAM PRESENTS:

Immunizations from A to Z

Immunization Health Educators offer this FREE, one-day educational course that includes:

- Principles of Vaccination
- Childhood and Adolescent Vaccine-Preventable Diseases
- Adult Immunizations
  - Pandemic Influenza
- General Recommendations on Immunization
  - Timing and Spacing
  - Indiana Immunization Requirements
  - Administration Recommendations
  - Contraindications and Precautions to Vaccination
- Safe and Effective Vaccine Administration
- Vaccine Storage and Handling
- Vaccine Misconceptions
- Reliable Resources

This course is designed for all immunization providers and staff. Training manual, materials, and certificate of attendance are provided to all attendees. Please see the Training Calendar for presentations throughout Indiana. Registration is required. To attend, schedule/host a course in your area or for more information, please contact **Angie Schick at 317.460.3671 or aschick@isdh.IN.gov; or http://www.IN.gov/isdh/programs/immunization.htm**

Biological and Chemical Terrorism Preparedness for Clinical Laboratories

The Indiana State Department of Health (ISDH) invites you to participate in a full-day workshop, offered free of charge at sites throughout the State of Indiana. We have designed this workshop to assist your facility with Biological and Chemical Preparedness Activities. We encourage you to attend one of these sessions to update your knowledge about biological and chemical agents, including packaging and shipping; the Laboratory Response Network; laboratory safety; and chain-of-custody requirements and to interact with staff from the ISDH as well as colleagues from area facilities.

Date	District	Hospital	Address	City
May 11	7	Landsbaum Center	1433 N. 6 ½ St Terre Haute, IN 47897	Terre Haute
May 15	1	Methodist Southlake	8701 Broadway Merrillville, IN 46410	Merrillville
June 8	3	Lutheran Hospital of Indiana	7950 W.Jefferson Blvd Ft Wayne, IN 46804	Ft Wayne
June 12	6	Ball Memorial Hospital	2401 W. University Ave Muncie, IN 47303	Muncie
June 19	8	Bloomington Hospital	601 W. 2nd St Bloomington, IN 47403	Bloomington
June 26	9	Dearborn County Hospital	600 Wilson Creek Rd Lawrenceburg, IN 47025	Lawrenceburg

Please register at least five business days prior to the date of the session that you wish to attend. No walk-in registrations will be accepted for these events.

Complete the registration form and fax, email or mail the registration form to:

Christine Feaster
Indiana State Department of Health
635 North Barnhill Drive
Indianapolis, Indiana 46202
Phone 317.233.8090
Fax 317.233.8079
Email Address: tfeaster@isdh.IN.gov

For more information or to obtain a registration form, please contact Christine Feaster.

ISDH Data Reports Available

The ISDH Epidemiology Resource Center has the following data reports and the Indiana Epidemiology Newsletter available on the ISDH Web Page:

http://www.IN.gov/isdh/dataandstats/data_and_statistics.htm

HIV/STD Quarterly Reports (1998-Dec 05)	Indiana Mortality Report (1999, 2000, 2001, 2002, 2003)
Indiana Cancer Incidence Report (1990, 95, 96, 97, 98)	Indiana Infant Mortality Report (1999, 2002, 2003)
Indiana Cancer Mortality Report (1990-94, 1992-96)	Indiana Natality Report (1998, 99, 2000, 2001, 2002, 2003)
Combined Cancer Mortality and Incidence in Indiana Report (1999, 2000, 2001, 2002)	Indiana Induced Termination of Pregnancy Report (1998, 99, 2000, 2001, 2002, 2003, 2004)
Indiana Health Behavior Risk Factors (1999, 2000, 2001, 2002, 2003, 2004)	Indiana Marriage Report (1995, 97, 98, 99, 2000, 2001, 2002)
Indiana Health Behavior Risk Factors (BRFSS) Newsletter (9/2003, 10/2003, 6/2004, 9/2004, 4/2005, 7/2005, 12/2005, 1/2006)	Indiana Infectious Disease Report (1997, 98, 99, 2000, 2001)
Indiana Hospital Consumer Guide (1996)	Indiana Maternal & Child Health Outcomes & Performance Measures (1990-99, 1991-2000, 1992-2001, 1993-2002)
Public Hospital Discharge Data (1999, 2000, 2001, 2002, 2003)	

HIV Disease Summary

Information as of March 31, 2006 (based on 2000 population of 6,080,485)

HIV - without AIDS to date:

348	New HIV cases from **April** 2005 thru **March** 2006	12-month incidence	5.61 cases/100,000
3,601	Total HIV-positive, alive and without AIDS on **March 31, 2006**	Point prevalence	59.51 cases/100,000

AIDS cases to date:

390	New AIDS cases from **April** 2005 thru **March** 2006	12-month incidence	6.07 cases/100,000
3,776	Total AIDS cases, alive on **March 31, 2006**	Point prevalence	63.14 cases/100,000
7,891	Total AIDS cases, cumulative (alive and dead)		

REPORTED CASES of selected notifiable diseases

Disease	Cases Reported in March *MMWR* Weeks 9-13		Cumulative Cases Reported January –March *MMWR* Weeks 1-13	
	2005	2006	2005	2006
Campylobacteriosis	26	41	46	70
Chlamydia	1,878	1,821	5,109	5,053
E. coli O157:H7	4	4	6	10
Hepatitis A	2	1	5	3
Hepatitis B	4	4	5	5
Invasive Drug Resistant *S. pneumoniae* (DRSP)	35	34	51	49
Invasive pneumococcal (less than 5 years of age)	8	9	13	20
Gonorrhea	699	788	1,990	2,238
Legionellosis	0	0	4	2
Lyme Disease	1	0	2	0
Measles	0	0	0	1
Meningococcal, invasive	3	7	5	7
Pertussis	53	25	82	44
Rocky Mountain Spotted Fever	0	0	0	0
Salmonellosis	33	52	52	101
Shigellosis	7	16	15	30
Syphilis (Primary and Secondary)	7	7	15	20
Tuberculosis	12	10	28	28
Animal Rabies	0	0	0	0

For information on reporting of communicable diseases in Indiana, call the *Epidemiology Resource Center* at (317) 233-7125.

Indiana State Department of Health
Epidemiology Resource Center
2 North Meridian Street, 5-K
Indianapolis, IN 46204
317/233-7125

Cover photo of Cryo-EM reconstruction of a norovirus capsid.courtesy of Dr. B.V.V. Prasad, Baylor College of Medicine, Houston, TX 77030

The *Indiana Epidemiology Newsletter* is published monthly by the Indiana State Department of Health to provide epidemiologic information to Indiana health care professionals, public health officials, and communities.